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The Meat You Haven't Met, Pt. 2

Rebecca Soja

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Established in 1936, Winter Livestock is one of the oldest cattle auctions in the nation. It has five locations: Dodge City, KS, Pratt, KS, LaJunta, CO, Enid, OK, and Riverton, WY. The cattle auction has sold over 30 million head of cattle for the area's finest cattlemen, always striving to get them top dollar for their animals. With a focus on cattle, the facilities of all the auction buildings and pens are maintained and laid out with special care for cattle needs.

The environment of the auction is quite casual; often there will be coffee or other concessions like one would expect to find at a sporting event or movie theater. Venues will facilitate not only auctions, but other social gatherings, making them hubs for cattlemen to bond and converse about anything and everything to do with the industry.

Today, people don't even need to go to the auction to participate with technologies of real-time, live stream auctions on the internet. Producers can receive constant updates on the status of the market.

Using terms like consignments or commodities when referring to heifers, cows, and steers being auctioned off, this sector is highly commodified and involves a lot of speculation. It's all about getting the highest price, not just for large corporations making billions of dollars, but also for the small ranchers who depend on marginal prices to support their families. Many ranchers pursue other careers in addition to ranching in order to make ends meet.

This requires predicting future costs dependent on what beef consumers will be willing to pay in order to preserve and build beef demand in the industry. The challenge is not necessarily beef quantity, but beef quality as prices increase and there is incentive for less cattle with larger carcass weights which affects portion size and market costs. Beef retailers form relationships with grocery retailers or restaurant owners to minimize the impact of high unit beef prices from larger meat cuts. Premium price needs to match premium qualities of marbling, tenderness, flavor, nutrition, etc.

Breeding efforts in cow-calf operations become critical to controlling beef quality and anticipating market trends. This phase of production depends on the prior phase and must look ahead to ensure efficiency and profits in later phases of the food chain.

in the
SPOTLIGHT

WINTER LIVESTOCK AUCTION

Dodge City, Kansas

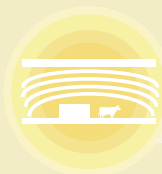
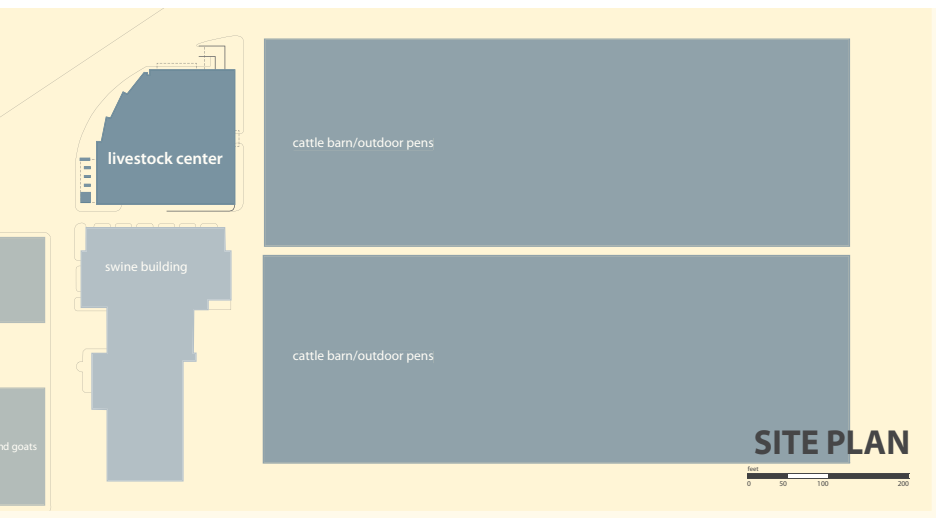
*We strive for top dollar
on your cattle.*

over
30 million
cattle **SOLD**

\$200-300
average price

**LIVE STREAM VIDEO
AUCTIONS**

online for your convenience
**and frequently updated
market reports**
to keep you in the now so you can
predict for the future markets



WIFI WANNA-BE

Show sold out? No worries. Just use your mobile device or computer to tune in live any time.

CONCESSIONS

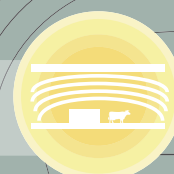
MUNCHIES

Can't have a show without some popcorn and candy to munch on.



SOLD!

Hoot and holler with a huge round of applause for the cattle. They are the stars in this arena so we give them the celebrity treatment.



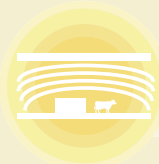
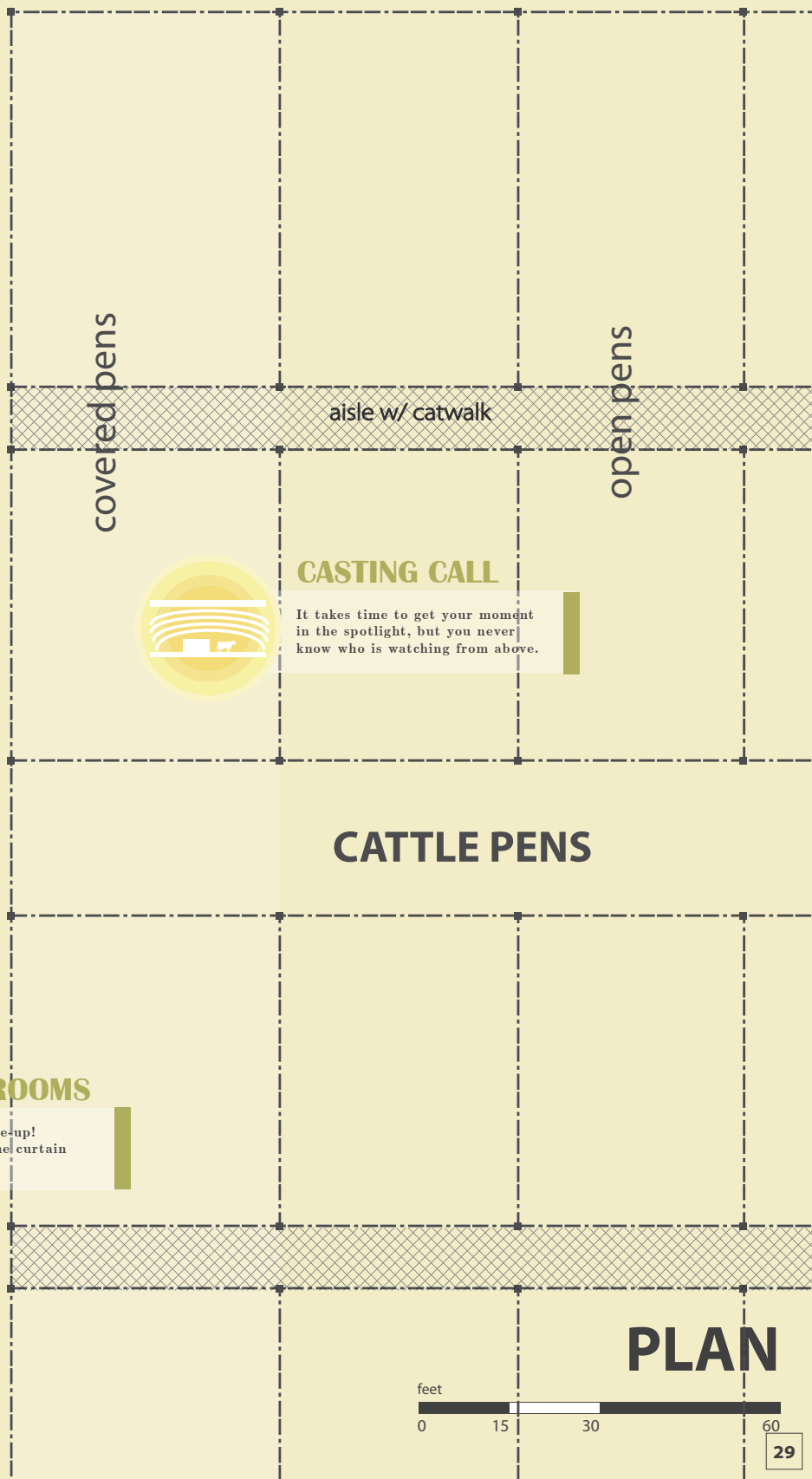
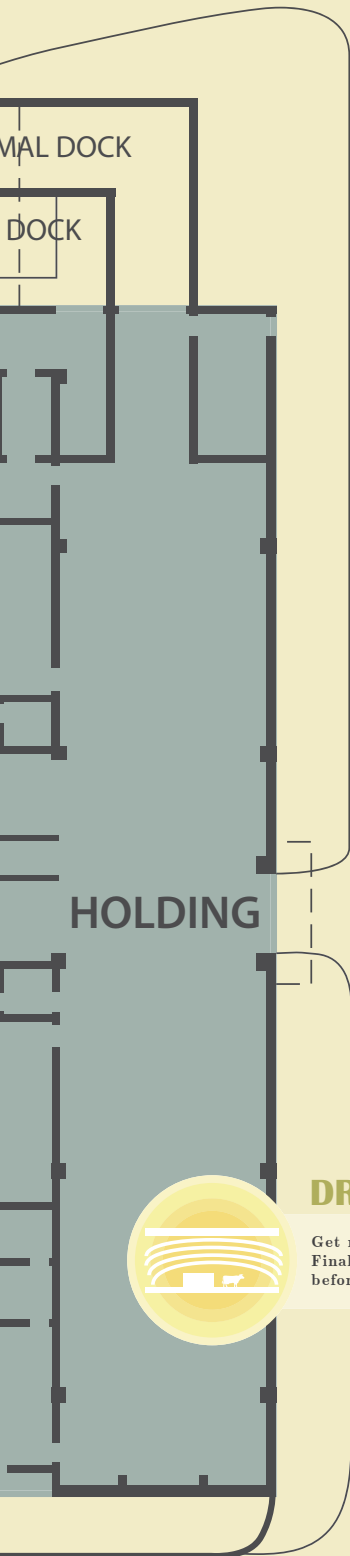
AUCTION

EXHIBIT

RESTROOMS

FOOD

ANIM



CASTING CALL

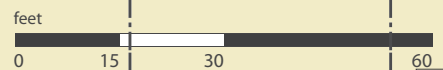
It takes time to get your moment in the spotlight, but you never know who is watching from above.

HOLDING

DRESSING ROOMS

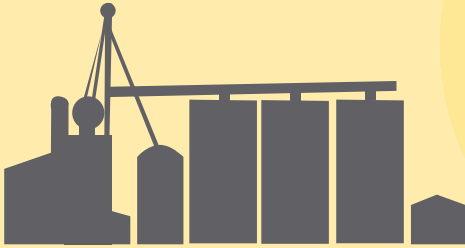
Get ready for your close-up! Final touches behind the curtain before the big debut.

PLAN



PRODUCTION

feedlot operation



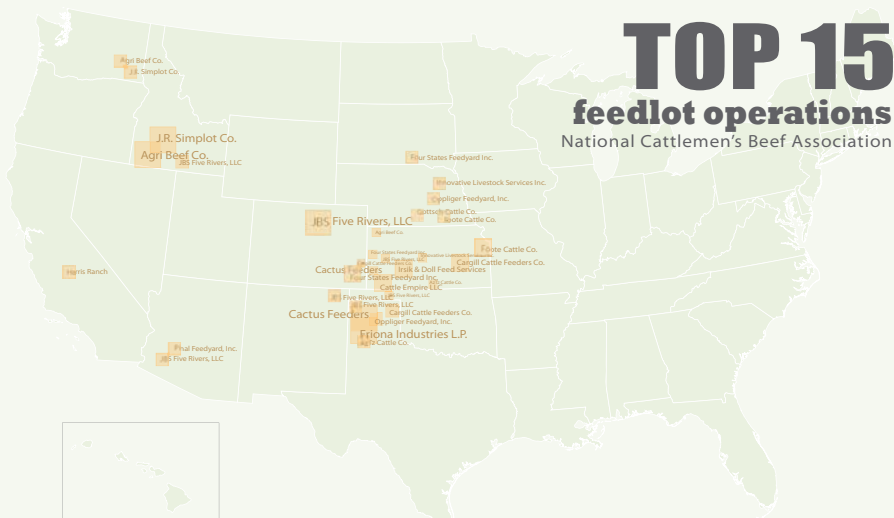
3



4-6 months



- mixing feed ingredients
- distributing rations
- "finishing" cattle
- management



The largest operations are highly consolidated in **RURAL** areas because they require extensive land areas comparable to small cities. For the most part, feedlots are **geographically concentrated** in the central region of the U.S. particularly in the Texas panhandle and Kansas.

in the
SPOTLIGHT

CACTUS FEEDERS

Cactus, Texas

Cactus Feeders may be the second largest cattle feeding operation in America, but it is the world's largest privately-owned cattle feeding operation with 10 feedyards in the Texas Panhandle and southwestern Kansas. This region provides the climate and access to abundant grain for feeds and cattle that is a formula for success.

While feeding and rapid cattle weight gain are the top priority at the feedlot, other important considerations are executed to keep the massive operations running. These include: cattle/feed financing, cattle performance record keeping and research to identify ideal genetics and practices, cattle marketing that responds to a dynamic beef industry market, environmental and food safety, and state-of-the-art health and nutrition programs. However, all of this is done exclusively to maximize cattle performance and enhance profitability from the cattle that are fed. Therefore, issues like animal health or environmental stewardship only happen out of necessity, not as leading principles. Relationships with grain-feed producers and pharmaceutical developers of antibiotics are also key to operation success.

The process starts and ends with the receiving/shipping area with non-slip chutes and ramps. Flow of cattle and spatial planning are critical for control, efficiency, and management. Such strategies aim to reduce the stress levels of the cattle so they remain calm and don't get sick. The feedlot also provides hospital pens or barns for sick animals to get treatment. Feeding cattle is a highly computerized and automated process that involves formulating and mixing feed rations, distributing rations and water, weighing animals, etc. Additionally, pen layouts facilitate feed schedules as well as drainage for waste control using strategies like tanks and waste lagoons.

Again, decisions are made to promote cattle and beef as commodities with commercial value.

*Let's do **business**. You bring cattle, and we'll feed them. Realize the **value** of your cattle with the **Cactus way**.*

10 feedyard
locations

(Texas Panhandle and Kansas)

FEED
TRUCK
CO.

revenues exceeding
\$750 million

500+ employees

527,000
cattle capacity

Cactus Feedyard

75,000
cattle capacity

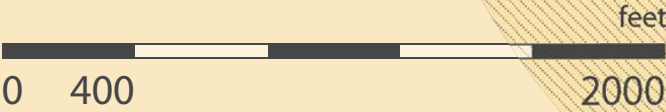
EAT-UP1

influencing the
beef industry
as the **largest,**
privately-
owned cattle
feeding
operation in the
WORLD

**CATTLE BUSINESS
OF THE CENTURY AWARD**
from the National Cattlemen's
Beef Association

**ENVIRONMENTAL
STEWARDSHIP AWARD**
from the Texas Cattle Feeders
Association

PLAN



TANK TUNNEL

Our waste tanks never leak and to prove it, we've constructed a tunnel below of the same metal and bolts for you to walk under. But you won't feel a drop.



ARCH

People all
dung as a
your own
out of our



LAZY LAGOON

Our water is so fresh, we're letting you take a dip! Relax as you float along a waste lagoon in an inflatable tube and take a moment to bask in the Texan sun.



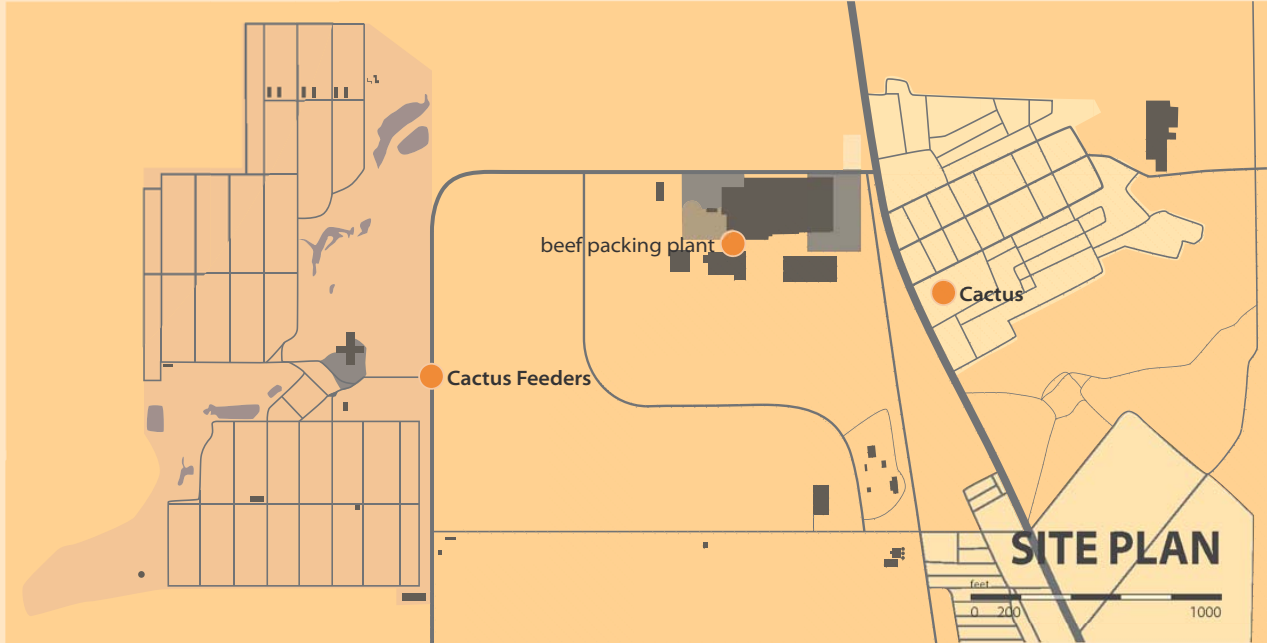
PLAY PEN

Conveniently, cattle pens are about the same size as a basketball court. Shoot some hoops or play your hand at a variety of other games in one of our pens that has no cattle in it.



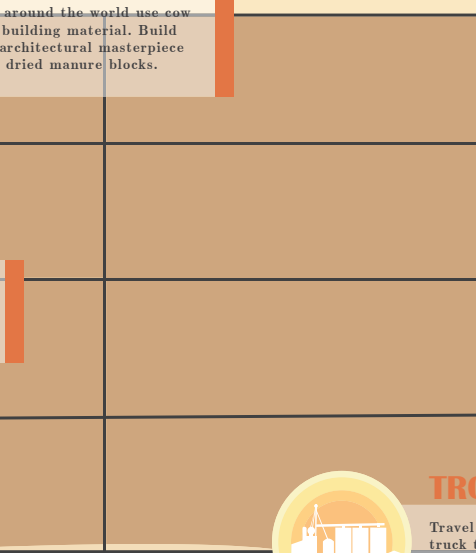
SUN

Grain
silos
techn
turne
adren



II-MANURE

around the world use cow building material. Build architectural masterpiece dried manure blocks.

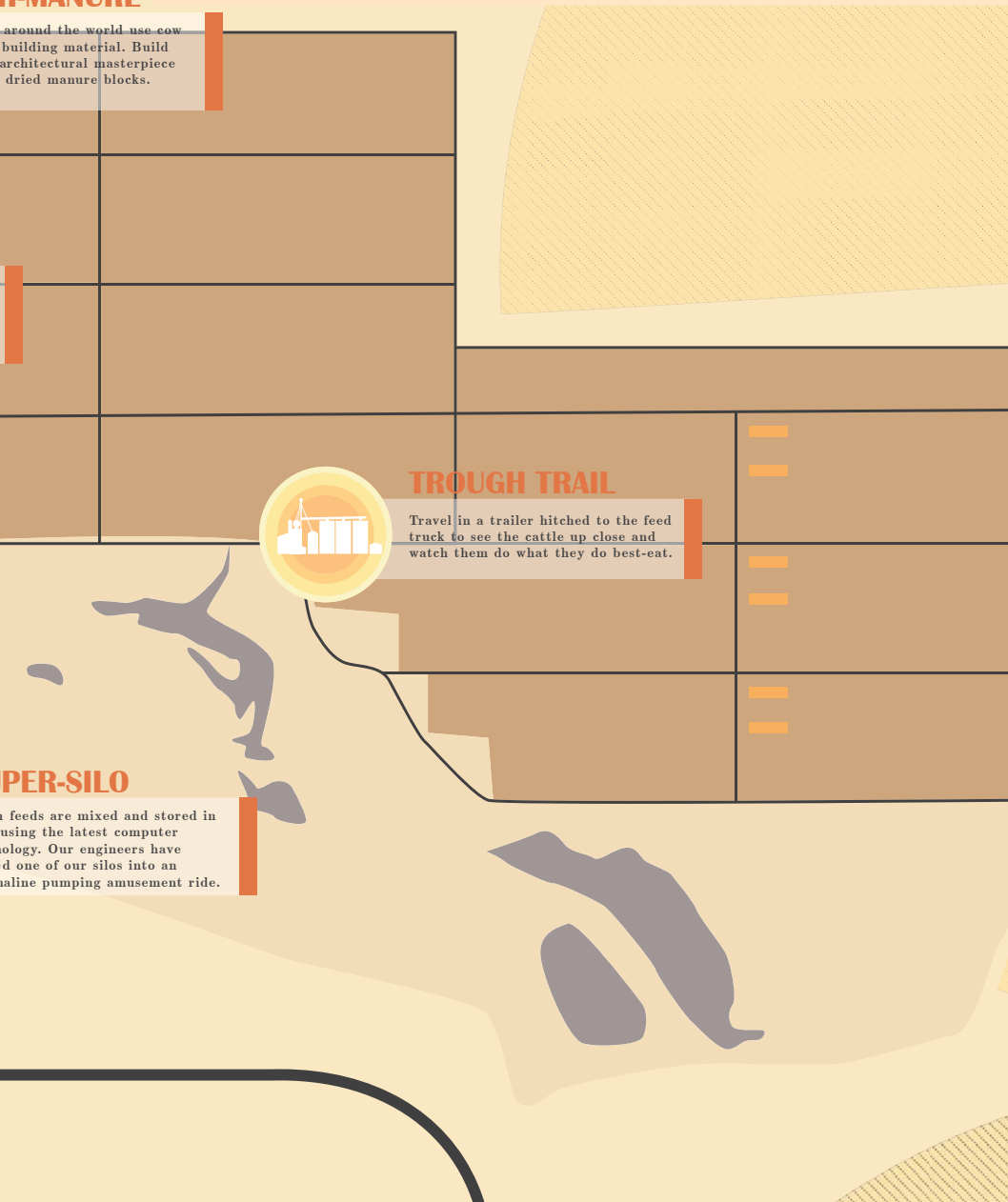


TROUGH TRAIL

Travel in a trailer hitched to the feed truck to see the cattle up close and watch them do what they do best-eat.

PER-SILO

feeds are mixed and stored in using the latest computer technology. Our engineers have d one of our silos into an ahaline pumping amusement ride.



packing plant

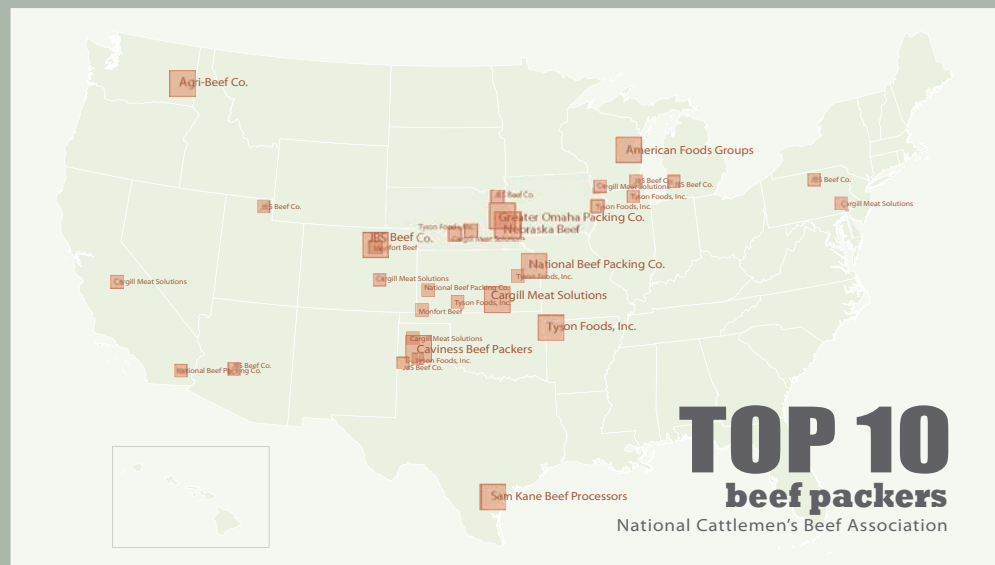


4



0-2 months

- holding cattle
- slaughter
- carcass disassembly
- inspection + grading
- processing
- freezing + storage
- some cooking, canning, etc.
- packaging



Because the **top packers dominate** the sector, there is **geographic concentration** from the Great Lakes regions to the central U.S. near feedlot operations. Massive factory facilities are often removed from city centers in **INDUSTRIAL zones**

JBS began over 50 years ago as a small family-owned beef company in Brazil and has expanded into a multi-billion dollar global corporation. Today, it is the biggest foreign meat company on US soil and the world's biggest producer of beef. The corporation buys poorly running facilities to make them more efficient, as was the scenario when they bought the Greeley slaughterhouse previously owned by Swift in 2007. Additionally they operate at a global scale with facilities in countries like Brazil and Australia that lead the way in beef exports. This success depends on success in previous phases of the food chain to meet standards and assure customers of the quality they expect. Accordingly, JBS uses vertical integration to dominate the feeding operation sector as well.

Each phase requires precision and efficiency, but perhaps this phase requires the most. Every task is calculated and the production line moves without stopping like clock-work that would never be possible without massive built environments of mechanization and sequencing. This is done for some safety precautions, but more so for speed to reduce per-head production costs.

One of the leading designers of animal handling and slaughter practices is Temple Grandin, an Autistic woman who has deep understanding for the way animals view the world. Her approaches promote animal welfare during slaughter with materials and spatial relationships that put the animals at ease as they move sequentially through our food system in conjunction with machines.

Although cattle slaughter is more challenging for standardization because cattle range in size, the processes of the slaughterhouse and packing/processing plants strive to achieve product outputs that are consistent. Technology has enabled greater automation for packaging, inspection, and speed, but at the same time, no machine is more capable of deboning and cutting meat than human laborers who endure dangerous conditions along assembly lines. This ideal output, centering on precision and efficiency for maximum profit, caters to customer values of appearance, flavor, portion size, or safety to deliver and exceed expectations. A number of brands like Swift or Certified Angus Beef are then marketed and distributed to retailers, wholesalers, and foodservice establishments. Therefore, this phase is crucial to transforming the cattle commodity into the beef commodity and is responsible for removing the blood and messiness of that process to make the consumption experience of eating convenient and pleasurable.

Looking to the future, the company strives for sustainability, as current research attempts to reduce carbon footprints, improve fuel/energy efficiency, especially regarding transportation, and create technologies to purify and conserve water. They also claim to care about employees and their communities. As a leader in the industry, these actions are being taken because of the pressure to serve as an example. Business not depends on social responsibility and natural resources so that production can continue at its current magnitude. What makes a difference is with which attitude this problem is combated.

in the
SPOTLIGHT

**JBS
BEEF CO.**

Greeley, Colorado

*Our mission: to provide the
best possible service, selection,
and value to our customers.*

5,400
cattle
slaughtered
per day

3,200
workers

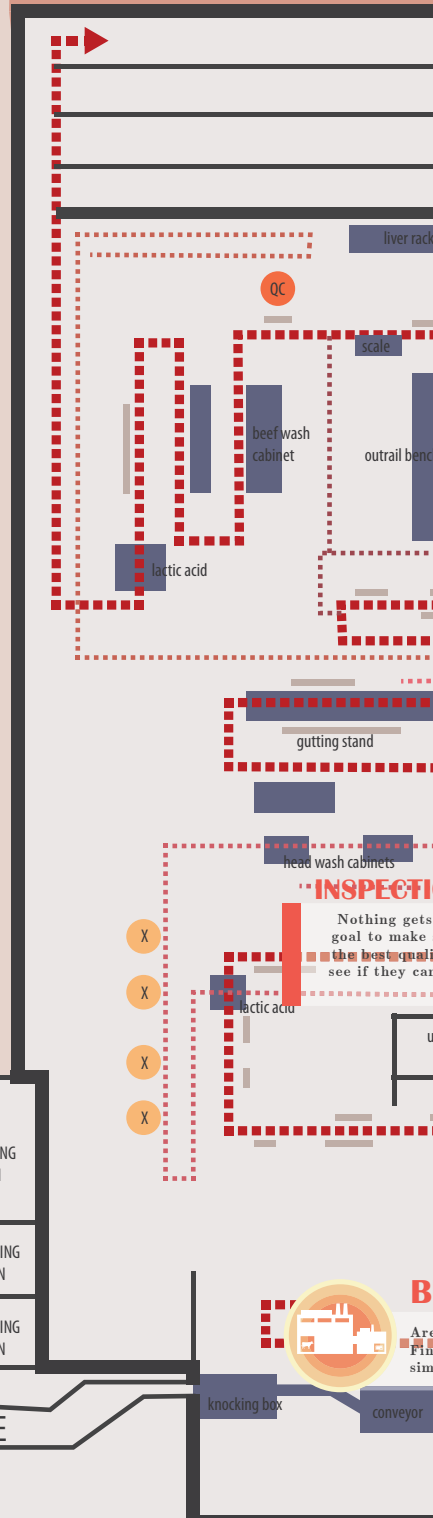
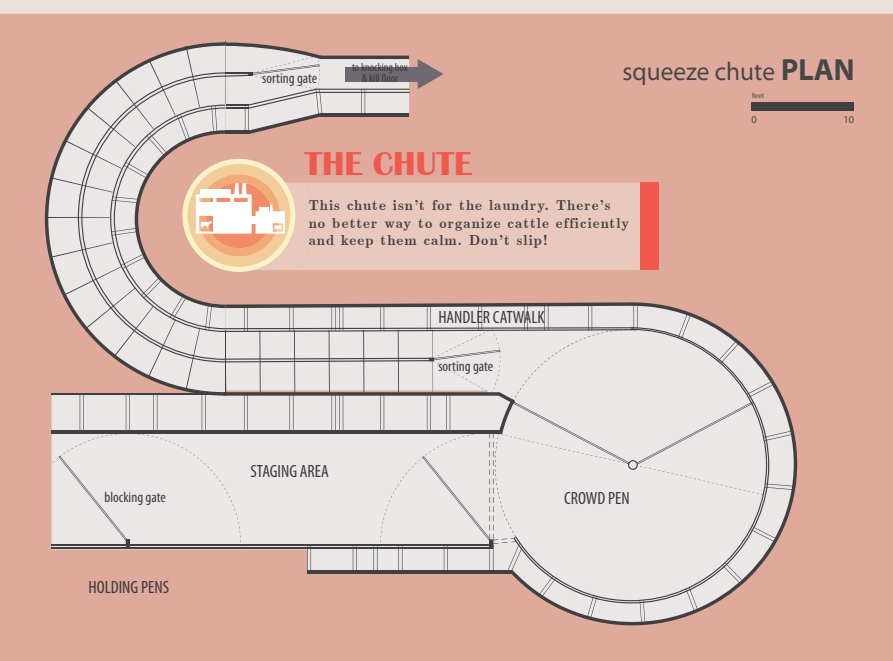
3.3 million
pounds of beef

World's
**Biggest
BEEF**
Producer

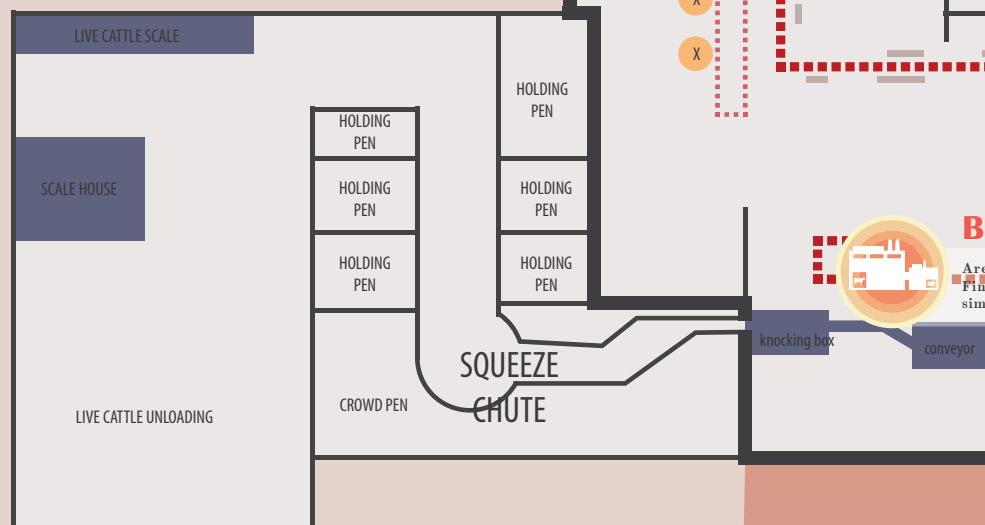
8 beef plants in the US
(CO, TX, UT, NE, WI, AZ, MI, PA)

2012 + 2013

SmartWay Excellence Award
from the U.S. EPA for leadership in
freight supply chain environmental
performance and energy efficiency



- QC QUALITY CONTROL
- X USDA INSPECTOR
- MAIN CARCASS LINE
- HEAD LINE
- OFFAL LINE
- LIVER LINE
- PAUNCH LINE
- OUTRAIL LINE
- OFFAL CONVEYOR
- ELEVATED STAND



kill floor PLAN

FREEZE TAG

Coolers keep meat at the peak of freshness. The best way to stay warm is to stay active. Why not play a game of tag amid aisles of hanging meat?

PLASTIC WRAP

Beef is packaged to seal in freshness. Automated machines can package all of our meat. What would it feel like to be wrapped in plastic?



COOLERS

FABRICATION

USDA OFFICE,
LUNCHROOM
& BATHROOM

CLEAN MEN'S LUNCHROOM

DIRTY MEN'S
LUNCHROOM

DIRTY MEN'S
LOCKERS

PLANT MANAGER'S OFFICE

CLEAN MEN'S BATHROOM

CLEAN MEN'S LOCKERS

WOMEN'S
BATHROOM & LOCKERS

QC
OFFICE

SUPERVISOR'S
BATHROOM
& LOCKERS

KILL FLOOR
OFFICE

SUPPLY &
LAUNDRY ROOM

SANITATION
OFFICE
KNIFE
SHARPENING

DIRTY MEN'S BATHROOM

SAFETY COORDINATOR

FIRST
AID
ROOM

viscera table

intestine conveyor

reinspection table

QC

cooler

foot table

cooler

scale

ON-PERFECTION

by our inspectors. It's our
sure our beef is safe and of
ty. Test our inspectors and
pick up on the 'bad' meat
you pass by them.



upstairs maintenance shop
and surveillance

recovery stand

backers' belt

SINEWY SPEEDWAY

Watch our expert beef cutters
slice their way through the
production line in record time



down puller

tail puller machine

side puller machine

denotation table

UPSIDE-DOWN HANGER

We can't avoid the blood, but you can!
Hang slide your way over the mess among
the suspended freshly slaughter cows.



bleed pit area

electrical stimulation

UCLS-EYE!

you a sharp shooter?
d out with this stun gun
ulation.

CONSUMPTION

→ grocery store

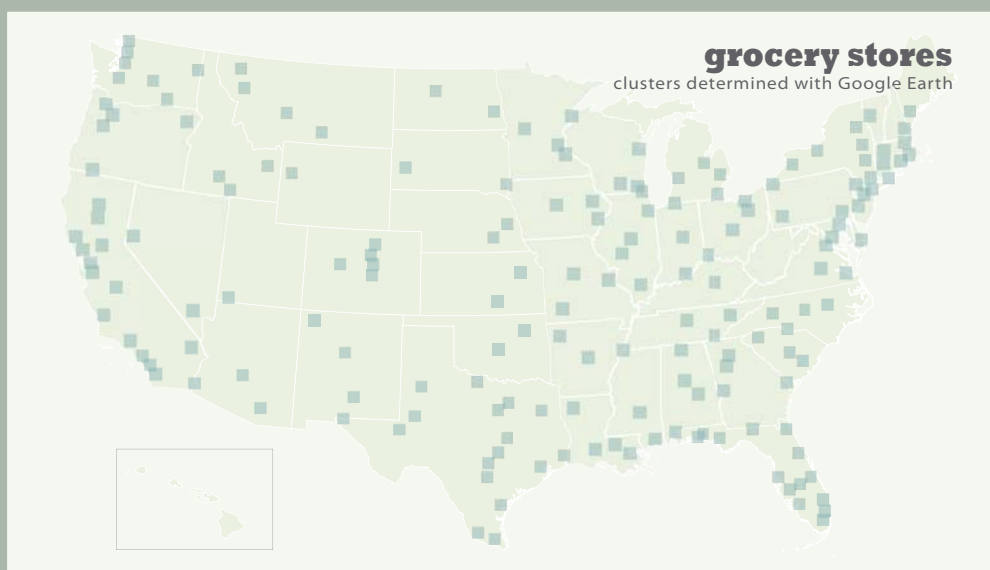


5



unknown

butchering
packaging
freezing/storage
some prep/cooking
some eating



The locations of most grocery stores reflect high population densities and issues of food access. Therefore there is greater concentration in **URBAN** and **SUBURBAN** areas.

Determining the best grocery stores isn't just about making the highest profits or having the most locations. There are countless other criteria that leads to satisfied customers including: prices, quality, variety, and availability of products, cleanliness, and customer service. In addition to food, grocery stores sell a shopping experience to gain customer loyalty. Many would say the ideal grocery store should enhance shopping experience, help us to eat better, and provide one-stop-shopping, which in this case, must include beef.

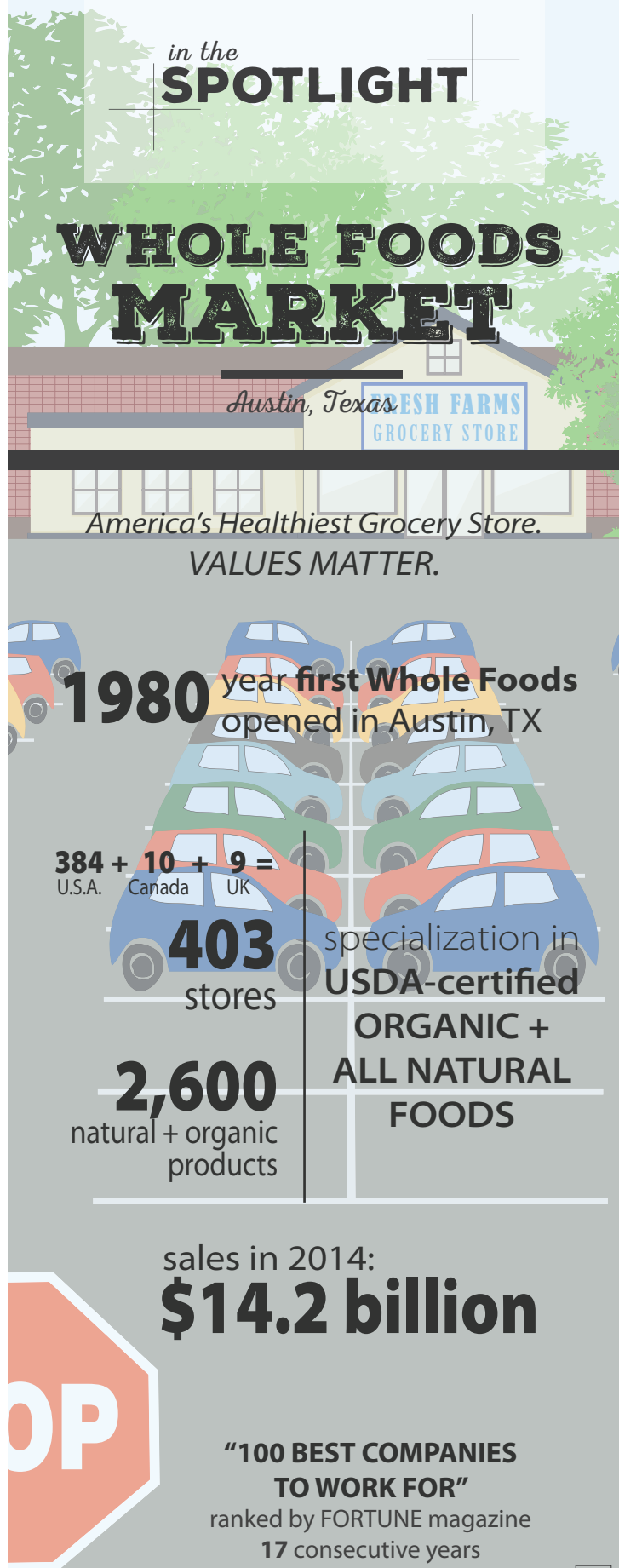
Whole Foods fits this criteria and has been recognized through multiple polls as one of the top grocery stores in the U.S. mostly due to it's specialization in organic and natural foods. This fact sets them apart from a lot of competitors, which is very enticing for people who want to eat better or know more about where their food is coming from. As a national food movement takes shape and critiques issues within the conventional food system, many people are becoming more concerned about the quality of their food. The success of the store reveals this trend. Whole Foods wants to provide this transparency and education about healthy eating for their buyers so they can make informed choices.

At Whole Foods, all of the beef sold has passed very rigorous standards. Farm animal and meat quality standards regarding the producer's raising and handling practices, feed, facility design, environmental conditions, employee training, and animal welfare during raising, transportation, and processing are outlined and enforced. Cattle are never ever given antibiotics or supplemental growth hormones; there are no animal byproducts in feeds; and cattle are raised on pasture/range for at least 2/3 of their life. Such standards hold producers accountable, forcing them to work with nature, not against it. And, the butcher is always free to answer questions about beef.

Basically, Whole Foods so kindly does all of the research for shoppers, selecting only the best quality, so that they may make purchases with peace of mind. However, even this sustainable, transparent approach can be very misleading. Questions need to be asked about how stores like Whole Foods can proliferate without contradicting their core values. Conventionalization is the process through which an alternative food value chain becomes only a slightly different version of an industrial one; this is happening at Whole Foods, but goes unnoticed by customers.

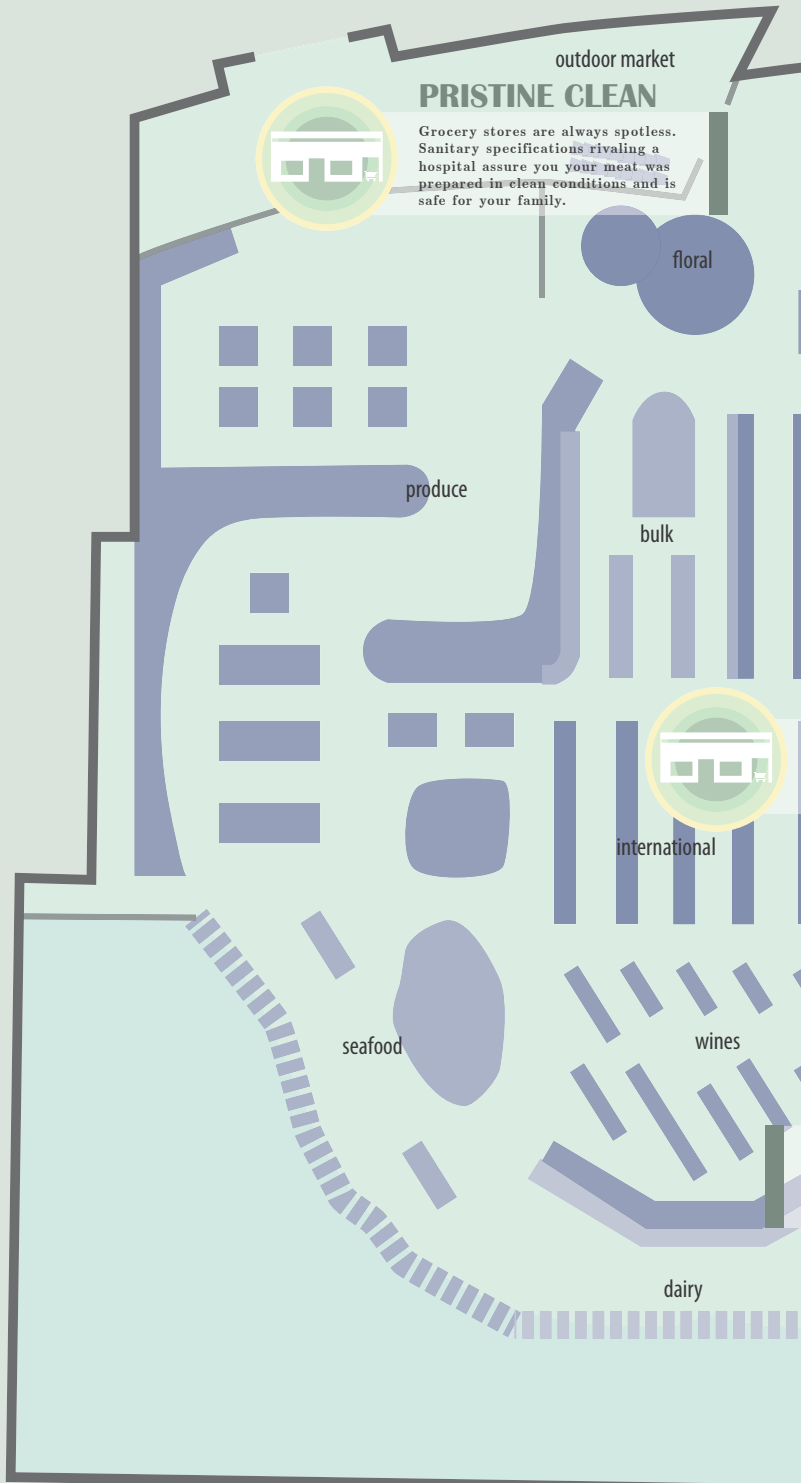
First, the definition of organic is weak because the USDA is so heavily influenced by agribusiness lobbying. Almost all of the organic food in the US comes out of California where five or six huge farms dominate a consolidated industry. Yet, Whole Foods makes you think you are supporting small, local farmers. They profile local farms, but don't actually sell their product because that would be nearly impossible for a company operating in multiple states. Organic also doesn't necessarily save energy like advocates claim mostly due to transportation costs. Surprisingly, not all food sold is even organic or natural and there are conventionally raised options mixed in. The store puts tremendous effort into giving customers a vague sense of virtue. Because so much emphasis is placed on food ethics, customers are misled about what they are really paying premium prices for.

A delightful, clean, seemingly uncomplicated shopping experience can be had at Whole Foods. Yet, despite not selling industrial beef, the store still operates like other grocery stores that do and falls into the same traps, which is concerning when they are supposed to be an example of the alternative.



PLAN

0 10



feet
100



CONSUMPTION

→ fast-food



6

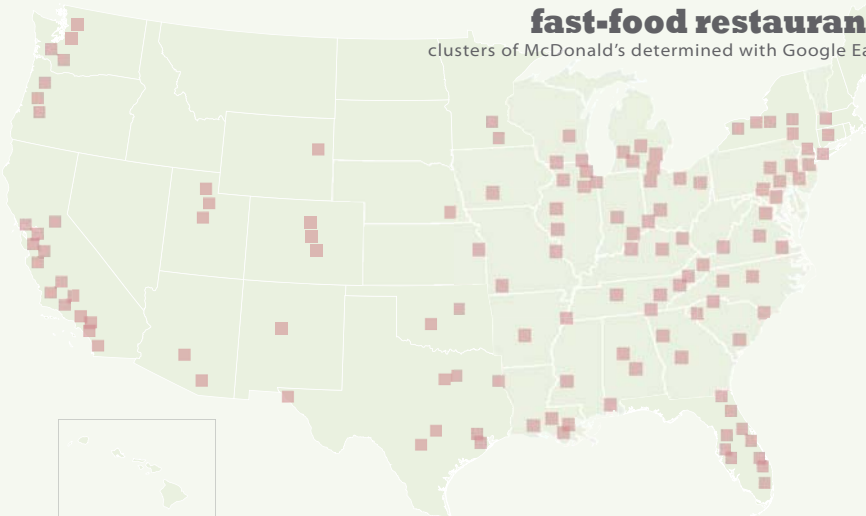


unknown

cooking
ordering
eating
storage

fast-food restaurants

clusters of McDonald's determined with Google Earth



Because they are **convenient**, fast-food chains usually follow major **highway routes**, but also proliferate in densely populated areas whether **URBAN, SUBURBAN, or RURAL**.

McDonald's was founded in 1948 as a self-service drive-in restaurant. The menu had only 9 items including the staple 15 cent hamburger. The second McDonald's opened in Des Plaines, Illinois in 1955, a red and white tiled building with Golden Arches designed by architect Stanley Meston. The golden arches have been an iconic symbol of the franchise, important to the brand recognition across the globe.

Modifications were made to the restaurants over time like the additions of indoor seating in 1962 or the first drive-thru in 1975. Both of these elements are common today and create a dining environment of quick, or on-the-go service. One can get food without leaving their vehicle in a matter of minutes after ordering. The same is true inside, where one waits in line, orders at the counter, and can find a table to sit at and enjoy their meal. The fast-food architecture is laid out to perform this kind of service. The place the food is sold is as important as the food itself because it shapes an experience of convenience and delight.

Today, the menu offers a multitude of options from wraps, to salads, to coffee, but burgers like the Big Mac continue to be the most iconic foods. In 2002, the corporation launched its dollar menu. The fact that they can have certain food items cost only a dollar, such as a hamburger is incredible, and only made possible due to the conventional food system. Clearly McDonald's takes advantage of cheap meat, an industry which exploded in the 1960s and 1970s.

In 2006, McDonald's added nutritional information to packaging to demonstrate the nutritional quality of their food. In the last decade, they have also been adding a variety of healthier options to balance out their menu. It is somewhat ironic that the restaurant was able to grow and expand globally because of cheap meat, but is now so successful it has ample money to invest in sustainable beef. This is important because as fast-food has always had a reputation of being unhealthy and McDonald's in particular has been criticized for its practices by an increasingly health-conscious and ethical public. The documentary "Super Size Me" is just one example of attacks on the corporation for contributing to America's obesity rates. Despite this, the fast-food chain has only been growing; clearly, there are other factors at play. People are still buying the highly processed food. What is it that convinces them to do so?

Nonetheless, McDonald's must respond to demands for better quality food and increased transparency to retain the loyalty of all customers and create a better company image. Different approaches can be taken: improve the food itself, or change people's opinions about the food. Remodeled restaurants are factors in the equation. Replacing old plastic furniture and red mansard roofs with modernized facades, colorful decor, free wi-fi and TVs, or in extreme cases added solar panels, is a drastic and expensive change that is immediately visible to consumers. Advertisements and additions to the menu also attempt to present a 'greener' McDonald's, and a corporation that is cognizant of its flaws and working to improve upon them. They want to alter the minds of skeptics and prove them wrong.

in the
SPOTLIGHT

MCDONALD'S RESTAURANTS

San Bernardino, California

*The customer experience is at
the core of all we do.*

since 1955
35,000
restaurants

1,400
restaurants opened in 2013

75 COMBO... 99¢
hamburgers per second
1 billion+
pounds of beef consumed
at U.S. McDonald's each year
= cheap, fast FOOD

1.9 million+
employees

**WORLD'S LEADING
GLOBAL FOOD
SERVICE RETAILER**

119 COUNTRIES

**#6 WORLD'S MOST
VALUABLE BRAND**
2013 - FORBES magazine

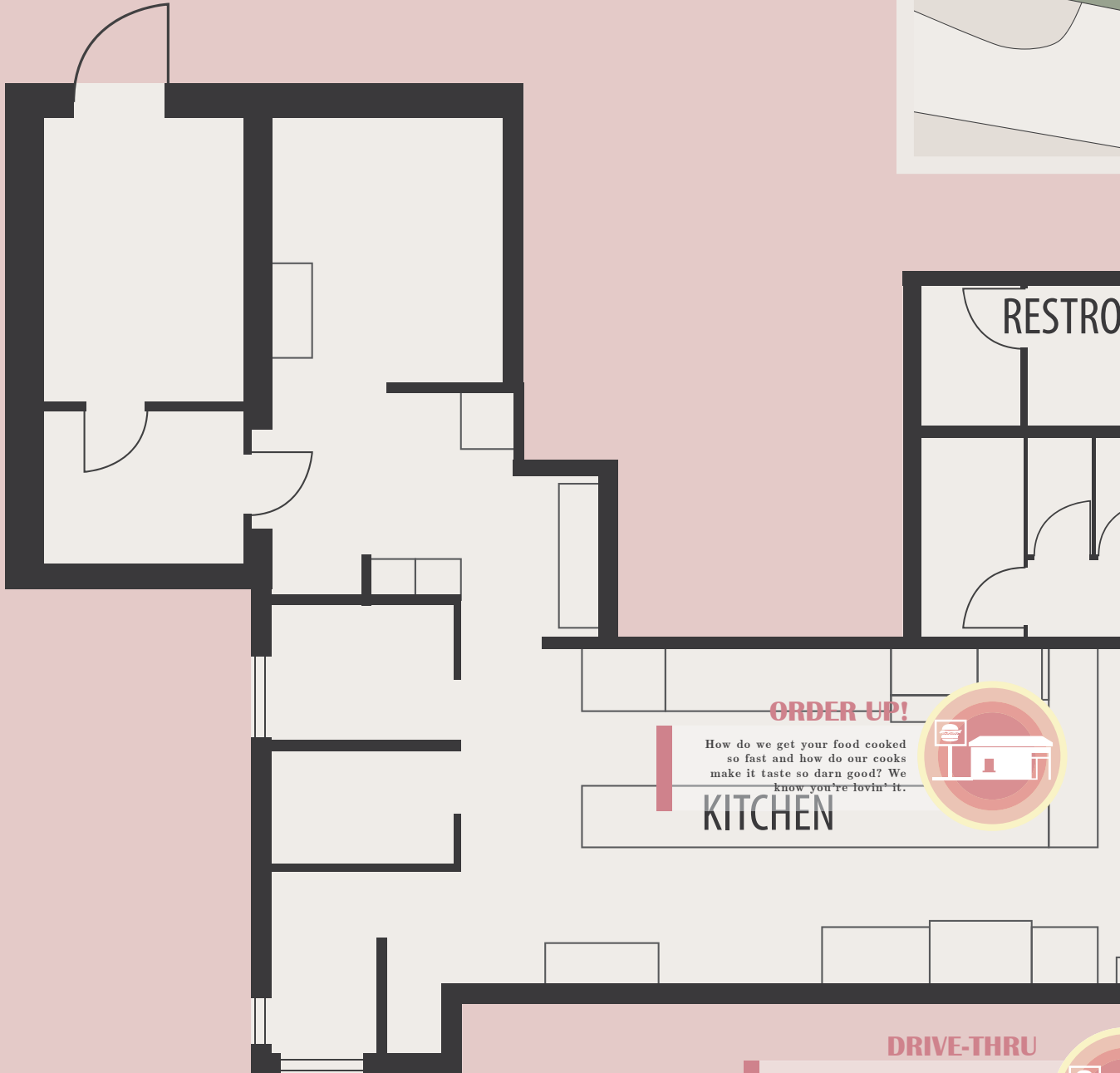
PLAN

feet

0

5

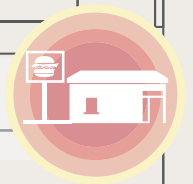
25



ORDER UP!

How do we get your food cooked so fast and how do our cooks make it taste so darn good? We know you're lovin' it.

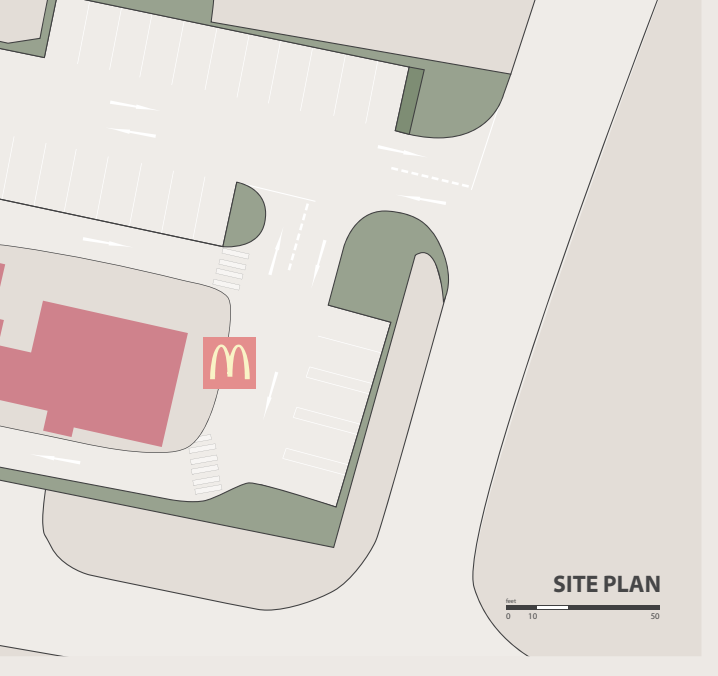
KITCHEN



DRIVE-THRU

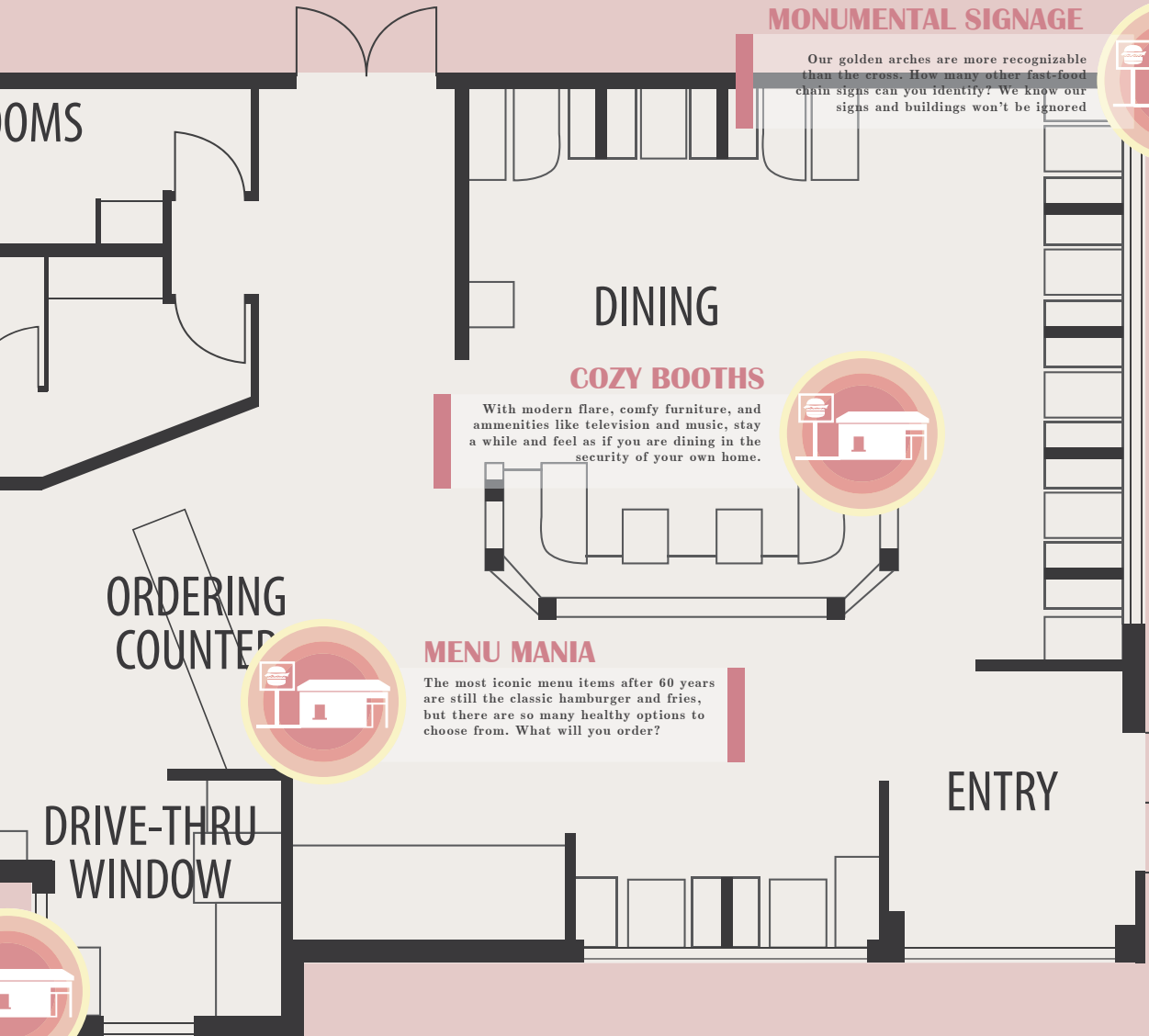
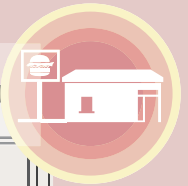
Always at your convenience! Enjoy a hamburger on the go when you're in a rush wherever you are and receive the consistent service and quality you deserve.





MONUMENTAL SIGNAGE

Our golden arches are more recognizable than the cross. How many other fast-food chain signs can you identify? We know our signs and buildings won't be ignored



CONSUMPTION

→ **steakhouse**



7

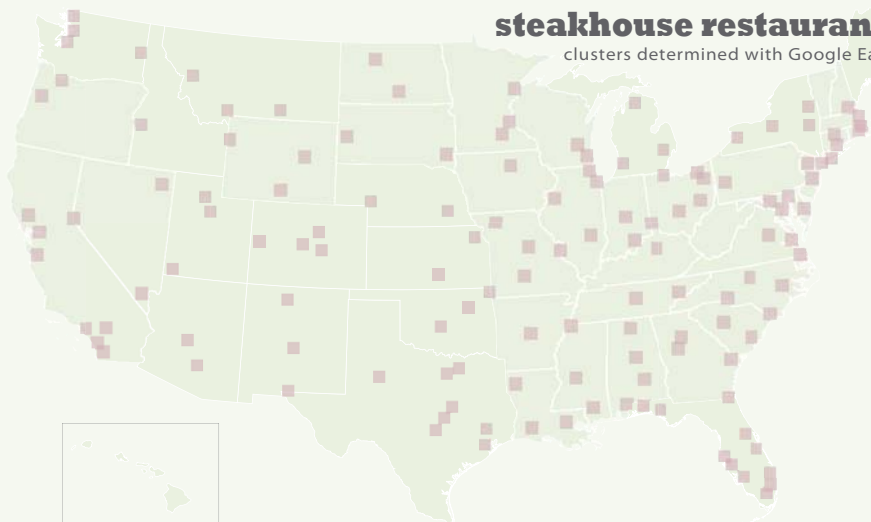


unknown

prep
cooking
storage
serving
dining

steakhouse restaurants

clusters determined with Google Earth



Steakhouse restaurants are the top of the line for beef dining, so they are typically located in more **affluent** and densely populated, **URBAN** regions and cities.

in the
SPOTLIGHT

PETER LUGER STEAKHOUSE

Brooklyn, New York

Among the country's finest.

The New York Times (2011 review)

"The restaurant Peter Luger has been around for an astonishing 120 years. It has inspired many imitators, but no other steakhouse serves a porterhouse so breathtaking. The beef has a subtle tang, an intense mineral quality, a crazy richness and a spectrum of textures: crunchy at the edges, and tender at the bone."

Peter Luger Steakhouse has been around for over 125 years. The rave reviews on steaks and burgers are due to meticulous selection and preparation yielding a level of quality that is simply unmatched. The meat has a buttery, silky texture and burgers are seasoned and cooked so perfectly there's no need for any toppings other than cheese and a bun.

Plating the perfect steak begins with a trip to the city's wholesale markets, where meat is inspected and purchased. Identifying superior meat requires exceptional skill and this knowledge has been passed down for generations. The meat selected is only USDA Prime, which constitutes less than 2% of graded beef cattle as the most elite grade. This rare grade is scrutinized for color, marbling, and texture to provide diners with only the best. Fatty, tender meat is praised by USDA standards and supports an industrialized food system. Still, people will spend large sums for it.

The meat is purchased on the carcass. The restaurant takes part in some of the butchering as a result. The restaurant building also houses a cellar for dry aging. In this process, the meat is aged in carefully regulated temperature, humidity, and ventilation conditions. Once steaks are properly aged, they are trimmed and brought up to the kitchen to be broiled to the requested finish of the patron: rare, medium-rare, or well-done.

With meat so impeccably divine, the restaurant practically becomes a destination for steak-lovers. The experience is rooted in taste and pleasure. It is meant to be savored. Unfortunately, plates are also pretty expensive, so not all people can enjoy it. However, the restaurant does sell their aged steaks online, if you are willing to spend hundreds of dollars on them of course.

Ultimately, a lot of work on the part of the restaurant owners, butchers, chefs, and waiters goes into creating an excellent fine dining experience that is not achieved in other sectors of beef production.

**USDA
Prime**
dry aged steaks

1887
restaurant opens

2 **LOCATIONS**
Brooklyn, New York
Great Neck, New York

rated

TOP STEAKHOUSE
in New York for
28 years



SITE PLAN

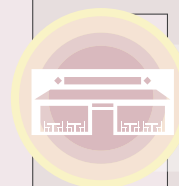
feet
0 40 100

Williamsburg Bridge

Williamsburg Bridge

Broadway

PETER LUGER
STEAKHOUSE

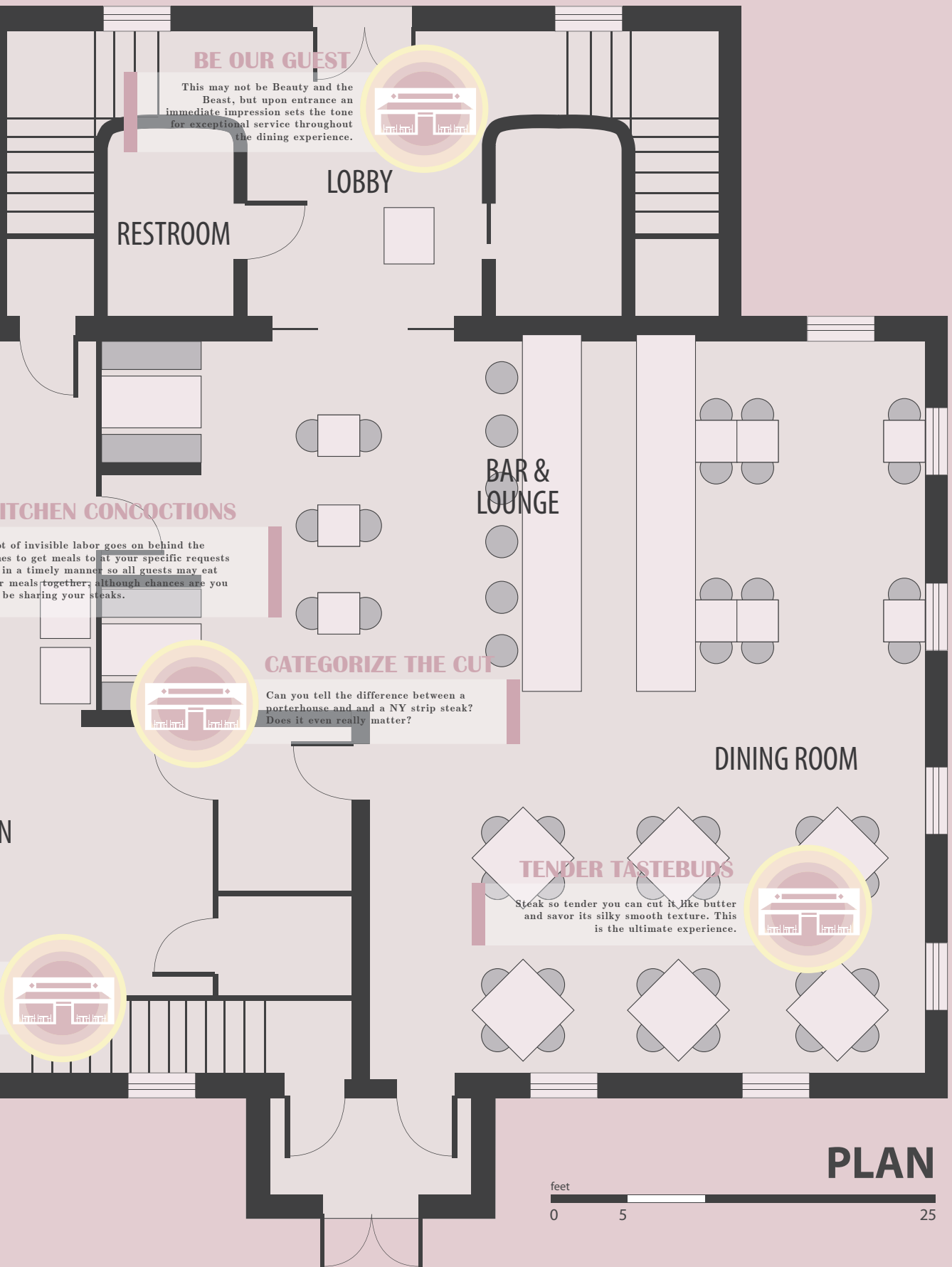


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KITCHEN

STELLAR CELLAR

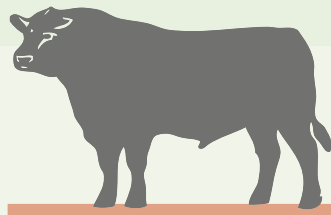
The dry-aging process is key to the quality of steak. Having a cellar for aging on-site makes a huge difference and only the top grade is meticulously selected.



BEEFVILLE, USA STATISTICS

the proof is in the numbers

#1
TOPPI
CHA



ING THE ARTS

ACHIEVING WORLD BEEF

Many industrial beef producers justify their methods by claiming to feed the growing population of the world. This was pretty persuasive when everyone was convinced that mechanization and technology could solve all of the world's problems. However, today many are skeptical and not so easily sold by this agenda as contradictions and negative long-term effects within the meat industry are exposed.

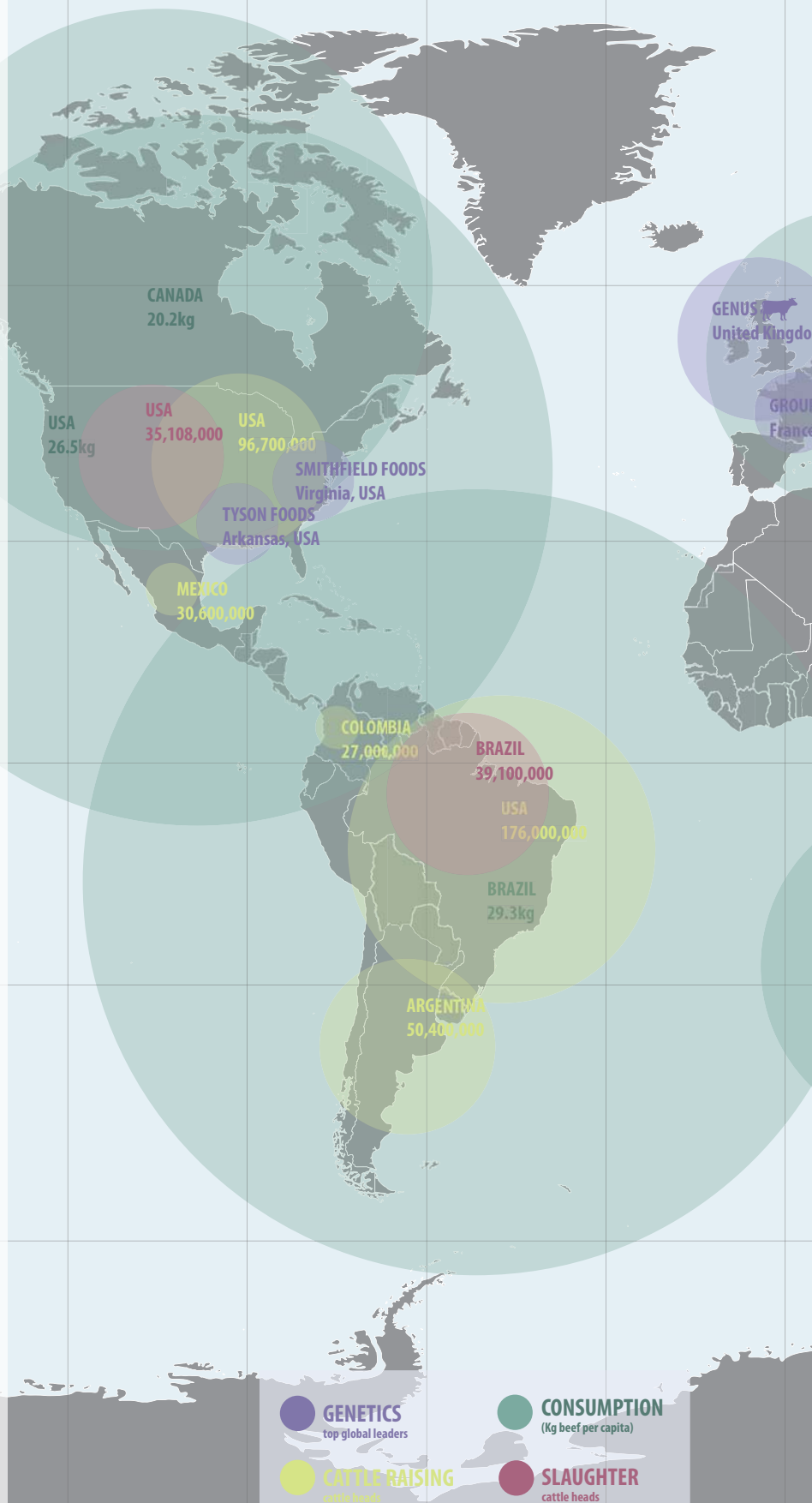
Global scales of economy FEEDING the World.

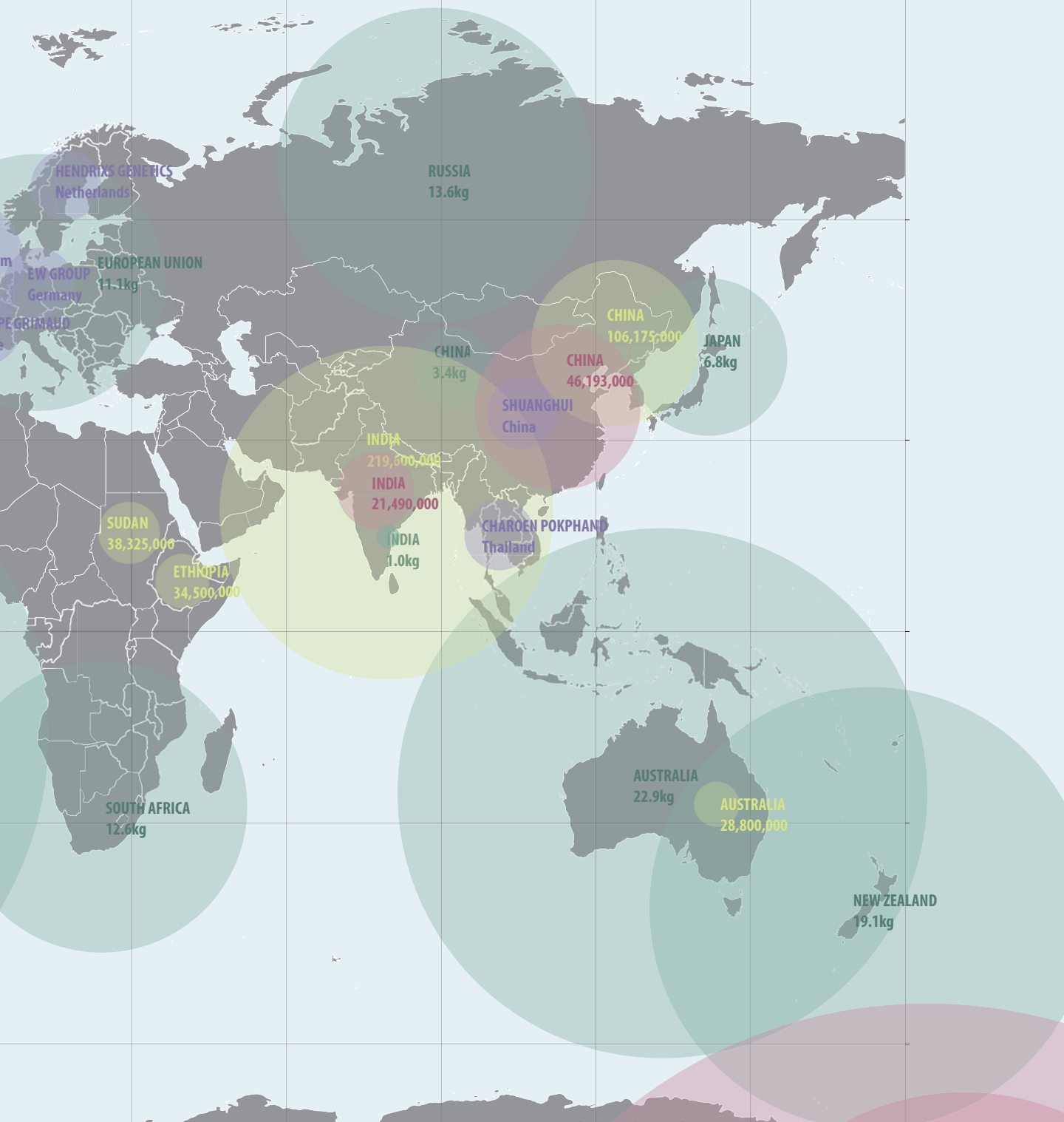
World markets and free trade for beef have introduced cheap beef to regions of the world where it was once a rarity or delicacy. Meat consumption was a status symbol of affluence, but now people in developing countries can afford it too and are consuming more of it. Nearly 7 million tons of animal protein is produced annually in the U.S.- enough to supply every American with 75 grams of animal protein per day compared to the recommended 56 grams of total animal and plant protein. Influenced largely by world economic powers like America or the European Union, these countries are adopting excessive western diets instead of continuing traditional cuisines.

Eat beef 3 times a day.

The contradiction is that even as meat becomes more accessible, it isn't feasible for every person in the world to eat beef three times a day. In reality, industrialized agriculture and meat production does not succeed in feeding the world as people still starve. If we can't produce enough food for human consumption now how can we expect to produce enough food to feed the animals that feed us? Trends towards greater beef consumption are not sustainable and need to be reversed.

Beef becomes a commodity. A variety of consumer tastes and cultures are homogenized and satisfied by beef that meets global standards. Cheap food is de-contextualized- people really have no idea where it comes from or where been; it comes from everywhere and nowhere at the same time.





HENDRIXS GENETICS
Netherlands

RUSSIA
13.6kg

EUROPEAN UNION
11.1kg

NEW GROUP
Germany

PE GRIMAUD

CHINA
3.4kg

CHINA
106,175,000

JAPAN
6.8kg

CHINA
46,193,000

SHUANGHUI
China

INDIA
219,600,000

INDIA
21,490,000

INDIA
1.0kg

SUDAN
38,325,000

ETHIOPIA
34,500,000

CHAROEN POKPHAN
Thailand

SOUTH AFRICA
12.6kg

AUSTRALIA
22.9kg

AUSTRALIA
28,800,000

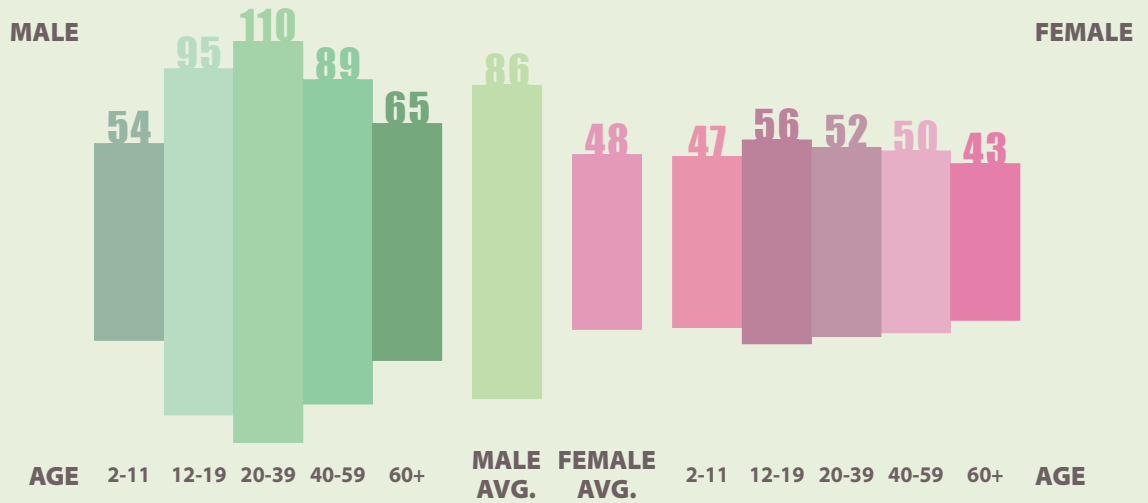
NEW ZEALAND
19.1kg

WORLD TOTAL
296,000,000

TOP 4 TOTAL
141,891,000

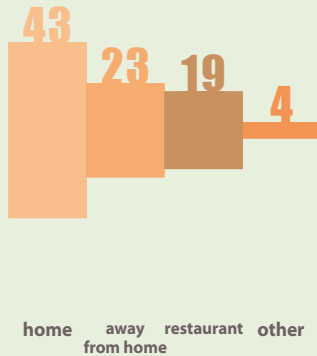
CONSUMPTION BY GENDER AND AGE

(pounds of beef per capita)



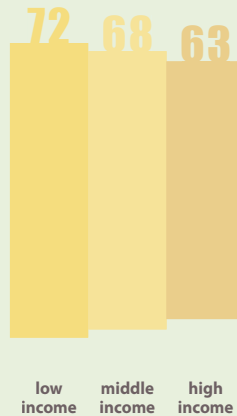
CONSUMPTION BY PLACE

(pounds of beef per capita)



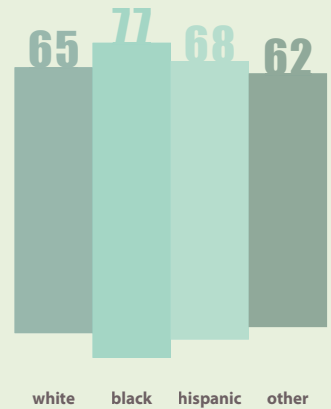
CONSUMPTION BY INCOME

(pounds of beef per capita)

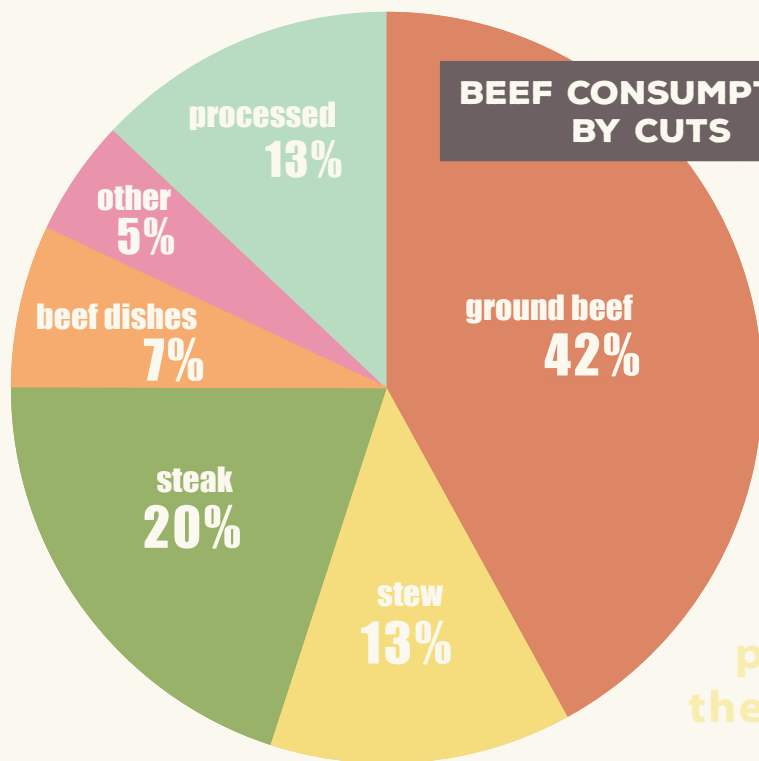


CONSUMPTION BY RACE

(pounds of beef per capita)



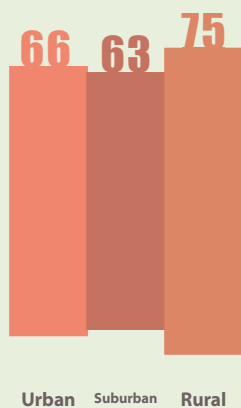
CONSUMER



67 POUNDS

average beef consumption per person per year in the United States

CONSUMPTION BY LOCATION
(pounds of beef per capita)



CONSUMPTION BY REGION
(pounds of beef per capita)



TOP CONSUMER

a **BLACK MALE** earning a **LOW INCOME**
age **20-39**
in the **RURAL MIDWEST.**



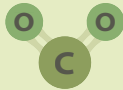
all data on beef consumption in the U.S. obtained from a USDA report written in 2005 by Christopher G. Davis and Bing-Hwan Lin

Factors Affecting U.S. Beef Consumption

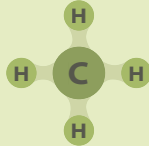
R DEMAND

4 MAIN GREENHOUSE GASES

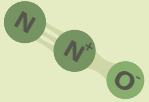
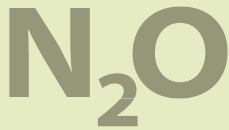
carbon dioxide



methane



nitrous oxide

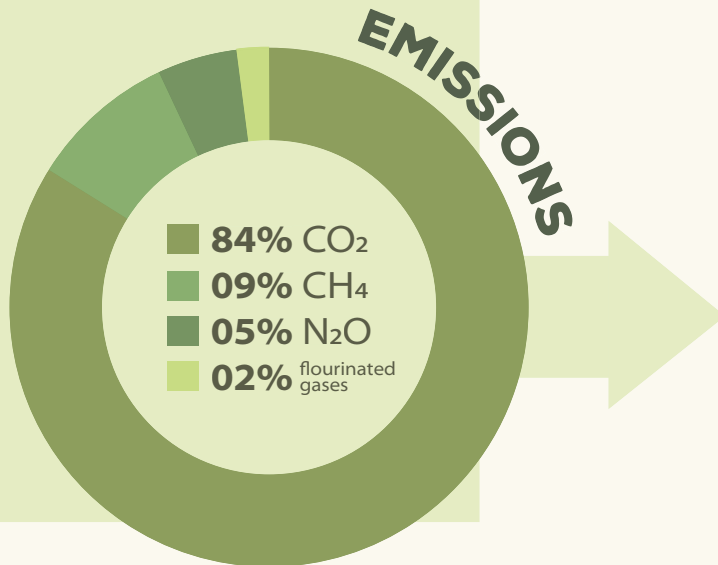


fluorinated gases

the 2014 IPCC report states:

**“humans ARE
having an impact
on climate change**

the food system is responsible for 50% of climate change due to crop and animal agriculture, land use change and deforestation, processing, transportation, packing, retail, and waste.



METHANE EMISSIONS

estimated

100-200 liters = 50
released per cow, per day



IMPACTING CLIMATE